What is claimed is:

1. A weight sensor for sensing the weight of an occupant in a vehicle seat, the seat having a seat pan and a seat member, the weight sensor, comprising:

a) a planar substrate having a hole therethrough;

b) a case surrounding the substrate, the case having an upper boss, a lower boss and a pair of ends, the case adapted to be mounted between the seat pan and the seat member, the upper boss located adjacent the seat pan;

c) at least one strain gauge resistor mounted on the substrate for generating an electrical signal in response to the substrate being stressed by the weight of the seat occupant, the electrical signal changing as a function of the weight of the occupant; and

d) a fastener passing through the seat member, the case, the substrate and the seat pan, the fastener located adjacent the lower boss, the fastener securing the sensor between the seat pan and the seat member.

2. The weight sensor according to claim 1, wherein the case has a blade at each end, the blades extending from the case toward the seat member.

3. The weight sensor according to claim 2, wherein the blades cause the substrate to be stressed when weight is applied to the seat pan.

4. The weight sensor according to claim 2, wherein a gap is formed between the seat member and a center portion of the case.

5. The weight sensor according to claim 4, wherein when the seat occupant weight exceeds a first magnitude, the gap closes and the seat member is in contact with the center portion such that the substrate is protected from an excessive load.

6. The weight sensor according to claim 1, wherein the sensor is located in a seat weight path between the seat pan and the seat member.

7. The weight sensor according to claim 1, wherein a plurality of the seat weight sensors are mounted in the vehicle seat and support the weight of the vehicle occupant.

8. The weight sensor according to claim 1, wherein the fastener is selected from the group consisting of:

a) bolts and nuts;

b) screws and nuts; and

c) rivets.

9. The weight sensor according to claim 8, wherein the fastener passes through a clearance aperture in the seat member.

10. The weight sensor according to claim 1, wherein at least one wire is connected to the resistor.

11. The weight sensor according to claim 1, wherein an elastomeric washer is located between the fastener and the seat member.

12. A weight sensor for sensing the weight of an occupant in a vehicle seat, the seat having a seat pan and a seat member, the weight sensor, comprising:

a) a case mounted between the seat pan and the seat member;

b) at least one strain gauge resistor mounted within the case for generating an electrical signal in response to the case being stressed by the weight of the seat occupant, the electrical signal changing as a function of the weight of the occupant;

c) a fastener passing through the seat member, the case, and the seat pan, the fastener securing the sensor between the seat pan and the seat member; and

d) the case adapted to transfer to the strain gage resistor the weight of the occupant up to a first magnitude, the case preventing the strain gage from receiving weight beyond that of the first magnitude.

13. The weight sensor according to claim 12, wherein the case further comprises:

a) a first end, a second end and a central portion;

b) an aperture passing through the central portion;

c) an upper boss extending from the central portion;

d) a lower boss extending from the central portion;

e) a first blade extending from the first end;

f) a second blade extending from the second end; and

g) a substrate surrounded by the case, the strain gage resistor mounted on the substrate.

14. The weight sensor according to claim 13, wherein the blades extend as to contact the seat member.

15. The weight sensor according to claim 13, wherein the upper boss contacts the seat pan.

16. The weight sensor according to claim 13, wherein the lower boss contacts the fastener.

17. The weight sensor according to claim 13, wherein a gap is formed between the central portion and the seat member.

18. The weight sensor according to claim 17, wherein when weight beyond that of the first magnitude is applied, the central portion contacts the seat member thereby closing the gap.

19. The weight sensor according to claim 12, wherein a spring is located between the case and the seat pan.

20. The weight sensor according to claim 19, wherein a standoff extends toward the seat pan from each end of the case.

21. A weight sensor for sensing the weight of an occupant in a vehicle seat, the seat having a seat pan and a seat member, the seat member having an aperture, the weight sensor mounted between the seat pan and the seat member, the weight sensor comprising:

a) a case having a first and second end;

b) a lower boss extending from the case into the aperture;

c) an upper boss in contact with the seat pan;

d) a first blade located at the first end and a second blade located at the second end, the blades in contact with the seat member; and

e) at least one strain gauge resistor mounted within the case for generating an electrical signal in response to the case being stressed by the weight of the seat occupant, the electrical signal changing as a function of the weight of the occupant.

22. The weight sensor according to claim 21, wherein a substrate is mounted in the case, the strain gage resistor mounted on the substrate.

23. The weight sensor according to claim 22, wherein a hole is located in the case and substrate.

24. The weight sensor according to claim 23, wherein a fastener passes through the aperture and the hole and the seat pan, the fastener securing the sensor between the seat pan and the seat member.

25. The weight sensor according to claim 21 wherein the case is formed from an elastomeric material.

26. The weight sensor according to claim 21 wherein a spring is located between the upper boss and the seat pan.

27. The weight sensor according to claim 26 wherein a first and second standoff extends toward the seat pan from the first and second ends.

28. A weight sensor for sensing the weight of an occupant in a vehicle seat, the seat having a first and second seat member comprising:

a) a case mounted between the first and second members, the case adapted to move along an axis substantially perpendicular to the direction of occupant weight;

b) at least one strain gauge resistor coupled to the case for generating an electrical signal in response to the case being stressed by the weight of the seat occupant, the strain gage resistor being sensitive to the weight of the seat occupant and insensitive to other loads.

29. The weight sensor according to claim 28, wherein the case decouples the strain gage resistor from weight that is applied along an axis substantially perpendicular to the direction of occupant weight.

30. The weight sensor according to claim 28, wherein the case further comprises:

a) a first and second end;

b) a lower boss and an upper boss;

c) a first blade located at the first end and a second blade located at the second end;

d) an aperture; and

e) a substrate surrounded by the case, the strain gage resistor mounted on the substrate.

31. The weight sensor according to claim 30, wherein the first seat member has a hole, the lower boss located in the hole, the lower boss adapted to move in an axis in the hole.

32. The weight sensor according to claim 31, wherein a fastener secures the weight sensor between the first and second members.

33. The weight sensor according to claim 28 wherein a spring is located between the case and the second seat member.

34. The weight sensor according to claim 32 wherein a washer is located between the fastener and the first seat member.

35. The weight sensor according to claim 28 wherein the strain gage resistor is placed in tension.

36. The weight sensor according to claim 28 wherein the strain gage resistor is placed in compression.

37. A weight sensor for sensing the weight of an occupant in a vehicle seat, the seat having a first and second seat member, the weight sensor comprising:

a) a case mounted adjacent the first seat member, the case having a first and second end;

b) the case having a boss in contact with the first seat member;

c) a first blade located at the first end and a second blade located at the second end, the blades extending through openings in the first seat member to be in contact with the second seat member; and

d) at least one strain gauge resistor mounted to the case for generating an electrical signal in response to the case being stressed by the weight of the seat occupant, the electrical signal changing as a function of the weight of the occupant.

38. The weight sensor according to claim 37, wherein a fastener passes through the first and second seat members and the case.

39. The weight sensor according to claim 38, wherein a first spring is located between the case and a plate.

40. The weight sensor according to claim 26 wherein a second spring is located between the fastener and the second seat member.

41. The weight sensor according to claim 39, wherein the first spring is loaded to a first spring force.

42. The weight sensor according to claim 40, wherein the second spring is loaded to a second spring force.

43. The weight sensor according to claim 37 wherein the strain gage resistor is placed in either tension or compression but not both.

44. The weight sensor according to claim 37 wherein a reverse load is prevented from being applied to the weight sensor.

45. The weight sensor according to claim 37 wherein both a downwardly acting weight and an upwardly acting weight applied to the weight sensor causes an uni-directional stress in the strain gage resistors.

46. The weight sensor according to claim 37 wherein both a downwardly acting weight and an upwardly acting applied to the weight sensor cause a uni-directional stress in the strain gage resistor.

47. The weight sensor according to claim 45 wherein the weight sensor is adapted to prevent hysteresis in the output of the strain gage resistor.